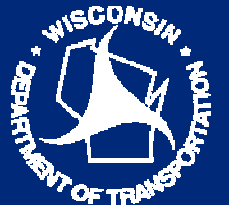




Shop Fabrication Process Improvement Initiative Tier 2 Bridge Tech Meeting Presentation 11/30/18



Kristin Revello, P.E. Structural Metals and Fabrication QA Inspection Unit Supervisor



Topics to be Covered Today



- Roles, Department QA, Fabricator and Contractor QC
- Requirement changes beginning with the 2019 Standard Specification
- The Fabrication Library Overview
- Questions?



WisDOT Fabrication Quality Assurance Program



Program Goal: To consistently enforce submittal of required documentation and enact Quality Assurance

- Provide electronic submittal requirements for fabrication documents
- Provide guidance for roles and responsibilities for all parties involved
- Ensure department quality assurance and contractor quality control roles
- Modify standard specifications and CMM for clarity and enforcement
- Clarify approved fabricator requirements



Shop Drawing QA Reviews



- Shop drawing QC is the responsibility of the contactor and fabricator. QA is the responsibility of the department.
- **Bureau of Structures will no longer be reviewing 100% of shop drawing submittals.** BOS will be providing QA reviews on a portion of the submittals we receive, as determined by the Department.
- When a shop drawing is selected for review, all parties will be notified of the impending review. Drawings not selected for review will be accepted and returned to all parties.
- For shop drawing submittals to the Fabrication Library, there will be a “shop drawings status” that we can utilize to show if a shop drawing will be reviewed, requires resubmittal, or was accepted.



Contractor Certificate of Shop Drawing QC



- ✓ 4 new forms for Contractor Certificate of Shop Drawing QC
 - ✓ Prestressed Concrete Girders (including box girders) — DT2328
 - ✓ Sign Bridges and Overhead Sign Supports — DT2326
 - ✓ Retaining Walls — DT2329
 - ✓ Fabricated Bridge Components — DT2327
 - ✓ Structural Steel Diaphragms
 - ✓ Expansion Devices
 - ✓ Railings
 - ✓ Bearing Assemblies
- ✓ Each form's list of items is based on common shop drawing errors found during past WisDOT reviews
- ✓ The Fabricator and Contractor must sign this form, indicating that a QC check of the shop drawings for accuracy and conformance to the contract plans specifications was completed by the fabricator

CONTRACTOR'S CERTIFICATE OF SHOP DRAWING QUALITY CONTROL – SIGN BRIDGES AND OVERHEAD SIGN SUPPORTS
Wisconsin Department of Transportation
DT2326 7/2018

CONTRACTOR'S CERTIFICATE OF SHOP DRAWING QUALITY CONTROL – RETAINING WALLS
Wisconsin Department of Transportation
DT2329 7/2018

CONTRACTOR'S CERTIFICATE OF SHOP DRAWING QUALITY CONTROL – FABRICATED BRIDGE COMPONENTS (Structural Steel Diaphragms, Expansion Devices, Railings and Bearing Assemblies)
Wisconsin Department of Transportation
DT2327 7/2018

CONTRACTOR'S CERTIFICATE OF SHOP DRAWING QUALITY CONTROL – PRESTRESSED CONCRETE GIRDERS
Wisconsin Department of Transportation
DT2328 10/2018

The Wisconsin Department of Transportation places all responsibility for quality review of shop drawings on the Contractor. With each shop drawing submittal and resubmittal, the Contractor must include this certification that the following items have been checked on Shop Detail Drawings.

Initials	Item
	1. Includes all information shown in the Girder Data Table given in the contract plans
	2. Girder lengths are consistent with substructure unit and bearing spacing
	3. All required hole locations in web are properly located
	4. Lift loop detail is shown and properly located
	5. Surfaces to receive sealer, epoxy surface treatment or staining are properly labeled
	6. Top flange coping, if required, is properly detailed
	7. Overhang brackets for exterior girders are properly detailed; coil rod assemblies are properly detailed
	8. All pertinent information in the General Notes of the contract plans are addressed
	9. Steel reinforcement sizes, dimensions, type and location are consistent with contract plans
	10. If used, welded wire fabric substitutions for conventional place and tie stirrup reinforcement, conform to details for this structure previously reviewed and accepted by Bureau of Structures.
	11. End of girder is properly detailed



Electronic Signature Update- Contractor Certificate of Shop Drawing QC



- BOS is currently working to facilitate the use of electronic signatures for Contractors and Fabricators completing Contractor Certificate of Shop Drawing QC forms.
- We will be providing guidance utilizing Bluebeam and Adobe.
- Electronic signature is not required, but is intended to be an available tool to minimize the “clerical effort” in preparing the required signatures on the DT forms (printing, scanning, emailing, etc.).
- When the DT form is signed and combined with the shop drawing will affect the ability of Region PMs and BOS staff to add comments to shop drawings and accept them, so please follow the forthcoming electronic signature guidance in the Fabrication Library Submission Standards Document on our website.



- ✓ 3 new forms for fabrication status reports
 - ✓ Prestressed Concrete Girders— DT2336
 - ✓ Fabricated Bridge Components, Sign Bridges and Overhead Sign Supports — DT2334
 - ✓ Retaining Walls — DT2335
- ✓ This form will need to be filled out on a weekly basis by the Fabricator
- ✓ This form allows all parties to know the status of fabrication for their projects
- ✓ This required form will reside in the Fabrication Library folder for each shop or plant
- ✓ Guidance for updating the status reports will be included in our Submission Standards Document available on our Website

	A	B	C	D	E	F	G	H	I	J	K
1	FABRICATION STATUS REPORT - PRESTRESSED CONCRETE MEMBERS										
2	Wisconsin Department of Transportation										
3	DT2336 8/2018										
4											
5	Complete, sign and submit this form to the corresponding structure folder in the SharePoint Fabrication Library										
6	This form shall be submitted to the Fabrication Library on a weekly basis. Create additional lines as needed.										
7											
8											
9	I certify to the best of my knowledge that the information below is correct.										
10											
11											
12	X										10/8/2018
13	(Fabricator's QC Manager – E-Signature)									Today's Date	
14											
15											
16	Week Ending	mm/dd/yyyy									
17	Fabricator	Company Name									
18	QC Manager	First Last Name									
19							Early Acceptance Cylinder Tests		56-Day Cylinder tests		
20	Structure ID	Project ID	Girder ID	Girder Type	Casting Date	Date Released	Test Date	Compressive Strength (psi)	Test Date	Compressive Strength (psi)	Shipped
21	B-XX-XXXX	XXXX-XX-XX	####	##X	mm/dd/yy	mm/dd/yy	mm/dd/yy	XXXX	mm/dd/yy	XXXX	mm/dd/yy
22											
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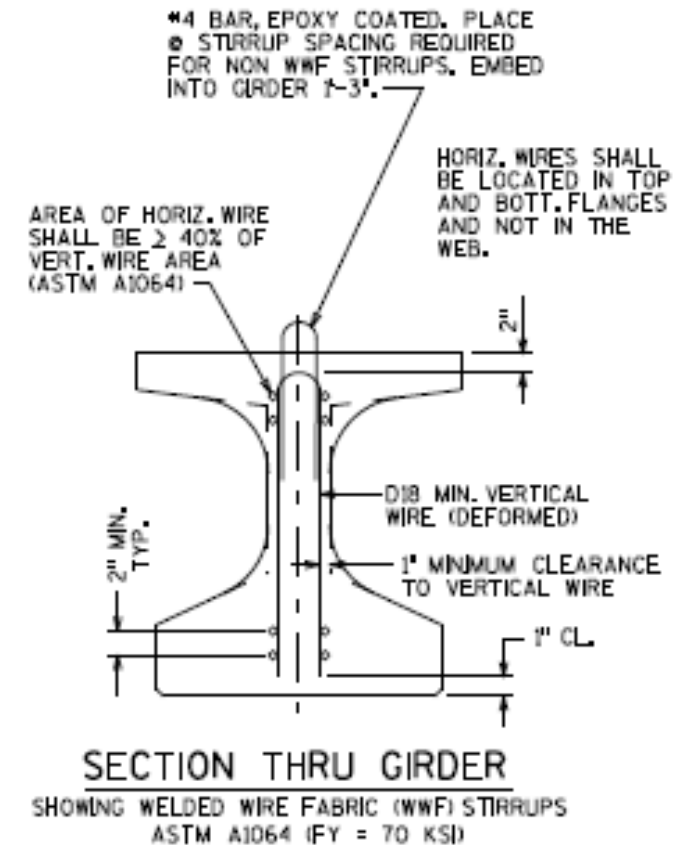
Progress Report



Prestressed Concrete Girders Welded Wire Fabric Submittals



- ✓ Bureau of Structures will continue to review 100% of the mesh stirrup substitutions
- ✓ Submit WWF substitution submittals to Bureau of Structures via WisDOT Fabrication Library
- ✓ This review and acceptance will need to occur prior to the submittal of shop drawings and DT2328





Approved Product Lists- New Approved Fabricator Lists



- ✓ 2 new Approved Fabricator Lists
 - ✓ Steel Bridge Primary Members
 - ✓ Steel Sign Bridges and Overhead Sign Supports
- ✓ If you have questions regarding whether a fabricator is qualified to fabricate for your project, please contact the Structural Metals and Fabrication QA Inspection Unit (SFU) and we will assist you.

APPROVED FABRICATORS, STEEL SIGN BRIDGES AND OVERHEAD SIGN SUPPORTS				
Date last edited: 11/15/2018				
Fabricator	Location	Phone	Approved Products	
Brookfield Fabricating	111 Stanbury Industrial Dr, Brookfield, MO 64628	(660) 258-2214	1, 2, 3	
Commercial Fabricators	7247 S 78th Ave, Brookfield, WI 53005	(708) 694-1199	1, 2, 3	
APPROVED FABRICATORS, STEEL BRIDGE PRIMARY MEMBERS				
Date last edited: 11/15/2018				
Fabricator	Location	Phone	Approved Products	
Hurt Fabricating	2615 Ma 14122 Dieseth Rd, Dalton, MN 56324	(218) 589-7121	1, 4	
Roadway Construction Products	361 Cla 1011 Weyrens Road, Fergus Falls, MN 56537			
Valmont Industries (Plymouth)	151 Ply 301 Dix Rd, Jefferson City, MO 65109	(573) 635-6121	1, 2, 3, 4	
Valmont Industries (Valley)	281 Val 131 S Harding Ave, Sedalia, MO 65301		1, 2	
Product Key 1 - Monotubes* 2 - Planar Trusses* 3 - Four Chord Trusses* * Refers to sign structure cross member	Industrial Steel Construction	86 North Bridge St, Gary, IN 46404	(219) 885-5610	1, 2, 3, 4
	LeJeune Steel	118 W 60th St, Minneapolis, MN 55419	(612) 243-2340	1, 2, 3, 4
	Munster Steel	1501 Huehn St, Hammond, IN 46327	(219) 924-5198	1, 2, 3, 4
	Veritas Steel (Eau Claire)	2800 Melby St, Eau Claire, WI 54703	(715) 835-2800	1, 2, 3, 4
	Veritas Steel (Wausau)	3526 Sherman St, Wausau, WI 54401	(715) 845-3191	1, 2, 3, 4
Contact: Kristin Revello Bureau of Structures, Structural Metals and Fabrication QA Inspection Unit (SFU) (608) 266-5090 kristin.revello@dot.wi.gov	Wabash Steel	2007 Oliphant Dr, Vincennes, IN 47591	(812) 882-4550	1, 2, 3, 4
Product Key* 1 - Unspliced rolled sections 2 - Field or shop spliced rolled beam bridge, straight or with radius > 500ft Built-up I-girder with constant web depth, straight or with radius > 500ft, spliced or unspliced Built-up I-girder with variable web depth, straight or with radius > 1000ft Truss with length < 200ft, almost entirely preassembled at the certified facility and shipped in no more than three subassemblies 3 - Tub or trapezoidal box girders Closed box girders Truss with length > 200ft Arches Bascule bridges Cable-supported bridges Moveable bridges Bridges with radius < 500ft				



Approved Product Lists- Modified Approved Fabricator Lists



- ✓ 4 new Approved Fabricator Lists replacing the prior Secondary Fabrication Items List
 - ✓ Fabricated Bridge Components
 - ✓ Railings
 - ✓ Expansion Devices
 - ✓ Diaphragms
 - ✓ Steel Bearings
- ✓ In order to fabricate these items, the fabricator must be on the appropriate APL

APPROVED FABRICATORS, FABRICATED BRIDGE COMPONENTS - RAILINGS						
Date last edited: 11/15/2018						
Fabricator	Location	Phone				
Aura Fabricators	14122 Dieseth Rd, Dalton, MN 56324 1011 Weyrens Road, Fergus Falls, MN 56537	(218) 589-7121				
APPROVED FABRICATORS, FABRICATED BRIDGE COMPONENTS - EXPANSION DEVICES						
Date last edited: 11/15/2018						
Fabricator	Location	Phone	Plate & Finger	Strip Seal Joint	Modular Joint	
Badger Railing						
Camelot Metals	14122 Dieseth Rd, Dalton, MN 56324 1011 Weyrens Road, Fergus Falls, MN 56537	(218) 589-7121		X		
Dave's Welding						
APPROVED FABRICATORS, FABRICATED BRIDGE COMPONENTS - DIAPHRAGMS						
Date last edited: 11/15/2018						
Fabricator	Location	Phone				
ESS Brothers Brother	Ace Iron and Steel 5118 N 124th St, Milwaukee, WI 53225	(414) 466-9200				
Iron Works	Aura Fabricators 14122 Dieseth Rd, Dalton, MN 56324 1011 Weyrens Road, Fergus Falls, MN 56537	(218) 589-7121				
Janke General Cont						
Utility Sales & Supp	Camelot Metals 3100 82nd Ln NE, Fergus Falls, MN 56537	(651) 636-3450				
APPROVED FABRICATORS, FABRICATED BRIDGE COMPONENTS - STEEL BEARINGS						
Date last edited: 11/15/2018						
Fabricator	Location	Phone				
Van Lanen Manufac	Commercial F					
Wheeler Lumber	Janke General Cont					
		Aura Fabricators	14122 Dieseth Rd, Dalton, MN 56324 1011 Weyrens Road, Fergus Falls, MN 56537	(218) 589-7121		
		D.S. Brown	13380 W Marigold Ct, Andover, MN 55304 300 E Cherry St, North Baltimore, OH 45872	(763) 433-9185 (419) 257-3561		
		R. J. Watson	11035 Walden Ave, Alden, NY 14004	(716) 901-7020		
		Tobi Engineering	27709 W Concrete Dr, Ingleside, IL 60041	(847) 724-7880		



Fabrication Resources Webpage



- Application forms and the email address to request to be added to the APL for the following:
 - ✓ Steel Bridges
 - ✓ Fabricated Bridge Components
 - ✓ Sign Bridges and Overhead Sign Supports
- Fabrication Forms
 - ✓ Contractor Certificates of Shop Drawing QC
 - ✓ Fabrication Status Reports
- Roles and Responsibilities Document

Fabrication & Quality Assurance Construction Resources

Bureau of Structures
Design & Construction
Maintenance & Inspection
Fabrication & Quality Assurance
Manuals & HSI Quick Links
Research & Outreach

Fabrication & Quality Assurance

Policy Memos | Fabrication & Field Welding Library | **Fabrication Resources** | Training | Additional Resources | Contacts

Roles & Responsibilities

Description	Date
Fabrication Quality Assurance Process	TBD
Field Welding	TBD

Applications for Approved Fabricator Status

Email form to: DOTDLStructuresFabrication@dot.wi.gov

Description	Date
Approved Products List (APL) Application Form - Steel Bridges	11/18
Approved Products List (APL) Application Form - Sign Bridges & Overhead Sign Supports	11/18
Approved Products List (APL) Application Form - Fabricated Bridge Components	11/18

Fabrication Forms

General

Description	Date
DT2330 Fabrication Storage & Shipping Plan	04/15
DT2332 Weekly QA Shop Inspection Report	04/15
Welding Procedure Specification (Template)	02/15
Procedure Qualification Record (Template)	02/15
Welder & Welding Operator Qualification Record (Template)	02/15

Steel Bridges

Description	Date
DT2333 Contractor's Certificate of Quality Control for Steel Bridge Primary Members	03/15
DT2172 Primary Steel Bridge Fabrication Project Status Record	03/15
Butt-Welding Form	03/15

Sign Bridges & Overhead Sign Supports

Description	Date
DT2326 Contractor's Certificate of Quality Control for Sign Structures	11/18
DT2334 Fabrication Status Report - Sign Structures & Fabricated Bridge Components	11/18

Fabricated Bridge Components

Description	Date
DT2327 Contractor's Certificate of Quality Control for Fabricated Bridge Components	11/18
DT2334 Fabrication Status Report - Sign Structures & Fabricated Bridge Components	11/18



Submission Standards



- ✓ File Submittal Requirements
- ✓ Choosing Content Types
- ✓ Shop Drawing Review
- ✓ Updating Fabrication Status Reports
- ✓ Reviewing Files From SharePoint Using Adobe Reader and Blue Beam

Fabrication & Quality Assurance SharePoint Document Library

Bureau of Structures
Design & Construction
Maintenance & Inspection
Fabrication & Quality Assurance
Manuals & HSI Quick Links
Research & Outreach

Fabrication & Quality Assurance

Policy Memos | **Fabrication & Field Welding Library** | Fabrication Resources | Training | Additional Resources | Contacts

WisDOT SharePoint Libraries

Fabrication Library
Field Welding Library

Access for New Users
Complete the [Access Request Form](#) and email to DOTDLStructuresFabrication@dot.wi.gov

Manuals & Training Videos

Description	Revision Date
Submission Standards: WisDOT Fabrication & Field Welding Library	Coming Soon
User Guide: WisDOT Fabrication Library	Coming Soon
User Guide: WisDOT Field Welding Library	Coming Soon

Contact Kristin Revello for questions about this page.

<https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnsIt-rsrcs/strct/fab-sharepoint.aspx>



Roles and Responsibilities - Reference Guide



Fabrication QA Program Reference Guide

Definitions

Roles & Responsibilities

SFU Contact Information

Required Documentation by Structure Type

Standard Specification References

FABRICATION QUALITY ASSURANCE PROGRAM REFERENCE GUIDE (DRAFT)

Section 1 Definitions

Quality Control (QC)

Product oriented procedures that identify and correct flaws in fabrication technique, documentation specifications, initial

FABRICATION QUALITY ASSURANCE PROGRAM REFERENCE GUIDE (DRAFT)

Quality Assurance (QA) or Quality Verification (QV) Inspector

Owner (WisDOT) representative executing quality audits at the Fabricator facility. This individual may be a consultant or WisDOT inspector.

- Uploads weekly inspection reports to the Fabrication Library.
- Maintains open line of communication with Fabricator QC and is aware of the most current fabrication schedule.
- Notifies SFU of any deviation from contract plans by the Fabricator and of any breach of AWS, ACI and AISC codes or WisDOT procedures and requirements.
- Reviews contract plans, shop drawings and weld procedures. Ensures only accepted weld procedures are used in fabrication.

Structural Metals and Fabrication QA Inspection Unit (SFU)

Oversees the structures fabrication quality assurance program including management of in-plant inspection of structural steel members, sign structures, retaining walls, noise walls and prestressed concrete members.

SFU Supervisor:	Kristin Revello, PE	608-266-5090	kristin.revello@dot.wi.gov
Structures Engineers:	Brandon Burger, PE	608-267-4019	brandon.burger@dot.wi.gov
	Carla Principe	608-261-6110	carla.principe@dot.wi.gov
Quality Assurance Inspector:	Bruce Wulff	LTE	bruce.wulff@dot.wi.gov

- Manages Fabrication Library access and structure.
- Manages quality assurance fabrication inspection contracts and schedules.
- Will review all weld procedures and will review a percentage of submitted shop drawings selected for review, and the level of review received, will be a SFU.

FABRICATION QUALITY ASSURANCE PROGRAM REFERENCE GUIDE (DRAFT)

Roles and Responsibilities

Construction Project Engineer

WisDOT Construction Project Manager. Can be a WisDOT engineer or consultant engineer a representative for WisDOT. This individual(s) is the primary contact for the Fabricator, and Bureau of Structures.

Ensures WisDOT policy and specifications.

Ensures that Fabrication Status Reports and Inspection Reports have been uploaded to the Fabrication on a weekly basis.

Ensures that shop drawings and revisions have been uploaded to the Fabrication Library. Ensures that revisions are uploaded as part of a complete set of shop drawings.

Ensures original versions of RFIs, NCRs and/or DINs and the final responses to the Fabrication Library.

Fabricator

Facility or facilities performing such shop activities as cutting, welding, drilling, punching, and painting of structural steel, to the producer of precast prestressed concrete girders and to the earth retaining walls or noise barriers. The term Fabricator is used to describe roles usually by the Fabricator, but these could also be done by the Contractor.

Ensures the most current Quality Control Plan (QCP) on file with Bureau of Structures. Submits the report to the SFU Supervisor.

FABRICATION QUALITY ASSURANCE PROGRAM REFERENCE GUIDE (DRAFT)

Section 3 Required Documentation

All Documentation shall be uploaded to the Fabrication Library. Visit this page to request access to the library: <http://wisconsindot.gov/Pages/doing-business-with-us/eng-consultants/cnsit-rsrcs/strct/fab-sharepoint.aspx>

High Strength Structural Steel Members (Highway Bridge)

Document	Submitted by	WisDOT Specification	Note
DT2330 – Fabrication Storage & Shipping Plan	Fabricator or Contractor		
Certified Mill Test Results (CMTR)	Fabricator or Contractor		
DT2333 – Contractor's Certificate of Quality Control	Fabricator or Contractor		<ul style="list-style-type: none">• For Highway Bridge, Structural Steel Member fabrication only• Submit one DT2333 form for each revision
Shop Drawings	Fabricator or Contractor		<ul style="list-style-type: none">• Submit Shop Drawings 14 days before start of fabrication
Welding Procedure Specifications (WPS)	Fabricator or Contractor		
DT2472 – Weekly Fabrication			<ul style="list-style-type: none">• For Highway Bridge,



105.2 Supplemental Plans and Drawings

Fabrication Library Submittals



105.2.1 – General (*current language*)

105.2.2 – Fabrication Library Requirements (*new*)

- This will remove cross-referencing across the structure sections, eliminating conflicts
- Unique requirements (Such as DT2333 for primary steel members) will be included in the specific structure section

105.2 Supplemental Plans and Drawings

Revise 105.2 to incorporate fabrication library electronic submittal requirements for specified structures.

105.2.1 General

- (1) Submit to the engineer supplements to the approved contract plans, shop drawings, and the computations necessary to control the work. Do not change the approved contract plans without the engineer's written authorization.
- (2) If sufficient detail is not provided on the structure plans produced by the department, submit to the engineer plans, shop drawings and the computations required to successfully prosecute the work.
- (3) If required in the contract, submit plans for temporary structures, cribs, cofferdams, falsework, shoring, and form work. Ensure that these plans and accompanying drawings and computations are signed and sealed by a professional engineer registered in the state of Wisconsin.
- (4) Include a transmittal letter with each submittal made under 105.2. Indicate on shop drawings all deviations from the contract drawings and itemize these deviations in the transmittal letter. The department will file and may review these submittals. The department's review does not relieve the contractor of the responsibility for obtaining satisfactory results, for the accuracy of dimensions and details, or for conformity of these drawings with the contract. The contractor may begin work on associated items without the department's review.
- (5) Include the cost of furnishing all shop drawings in the unit price for one or more associated bid item.

105.2.2 Fabrication Library Submittals

- (1) If specific contract provisions require submittals under 105.2.2, also check and electronically submit shop drawings and computations to the department's fabrication library a minimum of 2 weeks before the start of fabrication. Conform to the fabrication library submission standards. Procedures for accessing the fabrication library are located at:

<https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/stotfab-sharepoint.aspx>



The WisDOT Fabrication Library Vision



- The Fabrication Library is not intended for contract administration, it is meant as a mechanism to promptly receive shop drawings, review and return comments to all parties.
- Intended to provide statewide consistency for fabrication submittals
- Allows for concurrent BOS and Region review of shop drawings
- Allows all parties to see the current status of shop drawing submittals (accepted, revise and resubmit, etc.)
- Allows all parties to check on the fabrication status of for items on your project, and determine if there are any potential schedule concerns
- Allows fabricators to request email alerts for key staff to be notified each time a document (or status) is changed in their folder in the Library.
- Beginning with December 2018 Let, all structure fabrication document submittals (shop drawings, calculations, etc.) will be submitted through the Fabrication Library

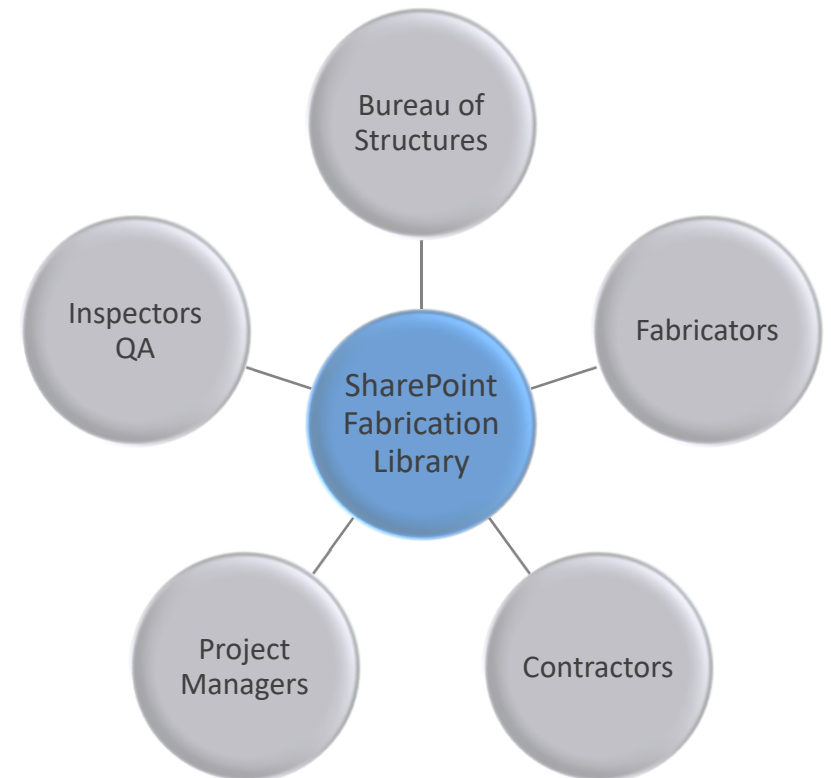


The WisDOT Fabrication Library Vision



The Goal: A single comprehensive library for the submittal of all fabrication documents, accessible to all parties (as appropriate).

- ✓ Contractors and PMs can see all fabricator folders
- ✓ Fabricators can only see the contents of their own folder
- ✓ QA Inspectors can see the folders of the shops they inspect.





The WisDOT Fabrication Library Vision



- The Fabrication Library is not intended to replace all communication between Project Managers, Contractors, and Fabricators.
- Recommend having a discussion at the Preconstruction Meetings to ensure that all parties are on the same page regarding submission of fabrication documents prior to the project getting started.
- RFIs and DINs are not to be submitted to the Fabrication Library. (This is a change from the past practice for steel bridges, where they were submitted to the Library for information only.)



WisDOT Fabrication Library- Document Submittal Reminders



- No transmittal letters to be included in Fabrication Library submittals
- Prior to submitting shop drawings, check to ensure the files have not already been added to the Library
- If there are any comments from Region staff, their comments should be included in the shop drawing that BOS has reviewed and/or accepted with mark ups to facilitate revisions. (Region staff can still add their comments to transmittal letters as well, but we want all comments from BOS and the Region on a single shop drawing in the Library).
- Project staff should not cc BOS in email correspondence meant to be notification of file submittals. We receive alerts on our side. Extra emails may delay responses to actual questions or technical issues.
- Project staff should not remove BOS stamps from shop drawings.
- In order to facilitate the need for BOS and Region shop drawing acceptance, we have added a column in the Fabrication Library where the Region may change the acceptance status.



Shop Drawing Acceptance



- The Fabrication Library allows for Shop Drawing acceptance by both the Project Manager and Bureau of Structures.
- Once both parties change the shop drawing status in Fabrication Library to “accepted”, the shop drawing will be formally accepted.

Quick edit Sync Export to Excel ... All Documents* ▾			
Project Management Revi... ▾	BOS Review ▾	Shop Drawing Status ▾	Created ▾
Revise & Resubmit		⚠ Revise & Resubmit	September 27
Revise & Resubmit	Accepted	⚠ Revise & Resubmit	October 1
Revise & Resubmit	Accepted	⚠ Revise & Resubmit	October 1
Revise & Resubmit	Accepted	⚠ Revise & Resubmit	October 14
Revise & Resubmit	Accepted	⚠ Revise & Resubmit	October 14
Revise & Resubmit	Accepted	⚠ Revise & Resubmit	October 14
Accepted with corrections as noted	Accepted	✓ Accepted with corrections as noted	October 18
Accepted			Feedback



The WisDOT Fabrication Library Structure



Office 365 SharePoint

SharePoint Home SharePoint Search Divisions

Structures Construction Records

☆ Not following Share

Search

+ New Upload Quick edit Sync Export to Excel Nintex Workflow

Fabrication

Structures Constructio...

Fabrication Unit

Edit

Fabrication Document Library

Name	Content Type	Email	Notify	Shop Drawing Revi...	+ Add column
Ace Iron and Steel - Milwauke...	Fabricator Dropbox				
Anderson Bridge - Colfax, WI	Fabricator Dropbox				
Armtec - McLean, VA	Fabricator Dropbox				
Aura - Dalton, MN	Fabricator Dropbox				
Badger Railing - Milwaukee, WI	Fabricator Dropbox				
Brookfield Fabricating - Brookf...	Fabricator Dropbox				
Camelot Metals - Blaine, MN	Fabricator Dropbox				
Central Paint - Mounds View,...	Fabricator Dropbox				
Commercial Fabricators - Brid...	Fabricator Dropbox				
Contech - Alexandria, MN	Fabricator Dropbox				
County Materials - Janesville, WI	Fabricator Dropbox				
County Materials - Roberts, WI	Fabricator Dropbox				
Crest Precast - La Crescent, MN	Fabricator Dropbox				
Cretex Concrete Products - Elk...	Fabricator Dropbox				

Return to classic SharePoint

Feedback



Fabricator View



Office 365 SharePoint

BROWSE FILES LIBRARY MANAGE

WisDOT - Division of Transportation System Development (DTSD) SharePoint Home SharePoint Search Divisions

Fabrication Document Library › County Materials - Janesville, WI

County Materials - Janesville, WI

[View All Properties](#)
[Edit Properties](#)

Structures Construction Records (Home)

- Fabrication Library
- Inspection Library
- Field Welding Forms Drop Off

Fabrication Unit

Recent

Workflow Tasks

Contractors

Nintex Workflow for Office 365

EDIT LINKS

Find a file

✓	Name	Content Type	Structure ID	Structure ID:Construction ID	Fabricator	Fabricated Component	DT2333 Attached	Project Management Review	BOS Review	Shop Drawing Status	Created	Modified
	503.0155 (SUB0157 R1) Prestressed Girder Shop Drawings, B-51-125	Shop Drawing	B510125	1030-24-72	County Materials - Janesville, WI	05 Prestressed Girder	N/A			Submitted-Original	October 8	October 17
	503.0155 (SUB161) Prestressed Girder Shop Drawings, B-30-113	Shop Drawing	B300113	1035-03-72	County Materials - Janesville, WI	05 Prestressed Girder	N/A	Accepted			October 1	October 8
	1030-23-72 503.0155 (SUB157) Prestress Girder Shop Drawings, B-51-125	Shop Drawing	B510125	1030-24-72	County Materials - Janesville, WI	05 Prestressed Girder	N/A	Revise & Resubmit		Revise & Resubmit	September 27	October 3
	SUB0133 (503.0146-123)	Shop Drawing	B510123	1030-24-79	County Materials	05 Prestressed Girder	N/A		Accepted		September 7	September 7

◀ This is what members of the **County Materials - Janesville, WI** permission group can view

*Can view all fabrication documents related to structures that were, are, and will be assigned to County Materials –Janesville, WI



To Request Access to The Fabrication Library



Fabrication & Quality Assurance SharePoint Document Library

Bureau of Structures

Design & Construction

Maintenance & Inspection

Fabrication & Quality Assurance

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Policy Memos | **Fabrication & Field Welding Library** | Fabrication Resources | Training | Additional Resources | Contacts

WisDOT SharePoint Libraries

Fabrication Library

Field Welding Library

Access for New Users

Complete the [Access Request Form](#) and email to DOTDLStructuresFabrication@dot.wi.gov

Manuals & Training Videos

Description	Revision Date
Submission Standards: WisDOT Fabrication & Field Welding Library	Coming Soon
User Guide: WisDOT Fabrication Library	Coming Soon
User Guide: WisDOT Field Welding Library	Coming Soon

Contact Kristin Revello for questions about this page.

<https://wisconsin.dot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/strct/fab-sharepoint.aspx>



Summary of the Changes- Beginning with December 2018 Let Projects



- ✓ Shop Drawings and Contractor Certificate of Shop Drawing QC forms need to be submitted to the Department a minimum of 14 days prior to fabrication.
 - ✓ You will want to keep this in mind when scheduling future work.
- ✓ For each resubmittal of shop drawings with the Contractor Certificate requirement, an updated Contractor Certificate will be required.
- ✓ Fabrication Status Reports will need to be filled out by the fabricator on a weekly basis.
- ✓ Two new Approved Fabricator Lists for Steel Bridge Primary Members and Sign Bridges and OSS
- ✓ Four lists for Fabricated Bridge Components replaced the prior Bridge Metal Secondary Fabrication Items
- ✓ The required mechanism for submittal of fabrication documents will be the Fabrication Library beginning with December 2018 Let projects.



Other Changes Over This Past Year



- ✓ A reduction in the percentage of shop drawings we review.
- ✓ The optional use of the Fabrication Library for previously Let projects to submit fabrication documents.
- ✓ You may request access to the Library now for key staff to gain familiarity and ensure a smoother transition for when the Library use is no longer optional.



Questions and Feedback

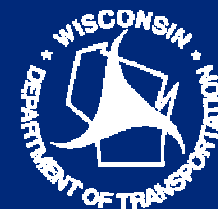


Questions? Feedback?



Field Welding Update

11/29/18





Contractor's Field Welding Plan – DT2337

New Form



- This form clarifies the process for Department review of the following:
 - ✓ WPSs and PQRs
 - ✓ Welder qualification records, continuity records, and certifications
 - ✓ Contractor Inspector qualifications
- This form will be submitted on a yearly basis to WisDOT to perform field welding, and is valid from February 1st – January 31st
- At any time, should a Contractor need to add a welder or contractor inspector due to staffing changes, we will work with the Contractor to facilitate this addition.
- This form is required for the 2018 construction season.
- Construction field staff can access these Contractor Field Welding Plans to ensure that the welds, welders, and contractor inspectors are currently approved for their particular field welding situation.

Contractor's Field Welding Plan
Wisconsin Department of Transportation
DT2337 mm/yyyy

Instructions: To be completed by the Contractor. This form and all its attachments must be submitted yearly to the Engineer for review and acceptance. Field welding may not be performed by the contractor without a current, accepted DT2337 on record.

Date	
Contractor Representative	
Contractor Company	

List all Weld Procedure Specification (WPS) numbers to be used for field welding operations within the next year. Attach all WPSs listed as well as any referenced Procedure Qualification Records (PQR).

+

List all certified welders who will perform field welding operations. Attach all welder qualification records, continuity records and certifications.

Select all welding codes for which contractor welders/operators are qualified:

- ☐ AWS D1.1 STRUCTURAL WELDING CODE – STEEL (Sign Structures / Steel Pole Splices / High Mast Light Poles / Railing)
☐ AWS D1.2 STRUCTURAL WELDING CODE – ALUMINUM
☐ AWS D1.4 STRUCTURAL WELDING CODE – REINFORCING STEEL
☐ AWS D1.5 BRIDGE WELDING CODE (Highway Bridge Main Members / Attachments to Highway Bridge tension zones / Railing)
☐ AWS D1.6 STRUCTURAL WELDING CODE – STAINLESS STEEL

List all individuals qualified to perform field welding Quality Control (QC) inspections. Attach proof of inspector qualification. Proof of qualification can be one of the following: (1) (Certified Welding Inspector) CWI Certification (2) Welding Qualification test results and welding continuity record/logs (must have welded within the past 12 months) (3) Experience in field/shop fabrication inspection (min. 2 years, list projects and position held)

Save the form with all attachments as: dtbxxx_yyyy-mm-dd_companyname.pdf
Email to DOTDStructuresFabrication@dot.wi.gov

Welding shall not begin without review of all attachments and acceptance of form DT2337 by the Department.



WisDOT Field Welding Forms - DT2320

Updated Form



- The DT2320 form has been updated, and is to be used during the 2018 construction season
- The intent of this update is to clarify areas of confusion with the previous version of the form, and remove outdated contact information
- For each day of field welding work, this form shall be completed by the Contactor Inspector, and signed by the Construction Project Manager and Contractor Inspector, indicating the inspection occurred as documented.
- The forms will be submitted to the Field Welding Library by the project engineer

Contractor Inspector, NOT WisDOT Inspector

FIELD WELDING INSPECTION CHECKLIST			
Wisconsin Department of Transportation DT2320 2/2018			
Purpose: In compliance with field welding quality control measures, the designated contractor inspector shall fill out this form on all structures requiring field welding. For each day of field welding work, use this form to document welding activities for each weld and submit the completed form to the engineer for inclusion in the permanent record. A copy of the form should be submitted to the SharePoint Field Welding Library by the engineer.			
Structure ID: _____		Project/Construction ID: _____ Welded Elements: _____	
Date: _____			
INSPECTION CHECKLIST			YES NO
Have the inspector's qualifications been submitted to the Bureau of Structures for acceptance?			
Welder name? _____			
Is the welder in possession of the required WPS?			
WPS Number(s)? _____			
Has the WPS been accepted by the Bureau of Structures?			
Electrodes are stored in a hermetically sealed source, dry and in good condition? (SMAW Only)			
Rod ovens (@250°F) are used to store opened electrode containers after no more than 4hrs of exposure (SMAW Only)?			
Are environmental conditions acceptable for welding? (No welding in water, rain or snow, high winds, or under 0°F without shelter)			
Temperature at time of welding? °F Date? / /			
All metal surfaces were clean and clear of galvanizing, paint, water, rust, oil or grease, before each weld pass?			
Preheat(s) used meet the applicable code requirements and accepted WPS? *			
What instrument was used to check the preheat temperature?			
If using a calibrated temperature indicator crayon to measure preheat temperature, note the temperature tolerance			
Can the voltage and amperage be read by the welder and inspector? ** (Calibrated gauges or calibrated clamp meter are used)			
Is the equipment calibrated?			
* Preheating temperatures			
WELD NUMBER/LOCATION	TEMPERATURE (F)		
** Welding Parameters			
WELD NUMBER/LOCATION	VOLTAGE (V)	CURRENT (AMPS)	
Visual Inspection			
WELD NUMBER/LOCATION	OBSERVATIONS OF WELD QUALITY/CORRECTIVE ACTIONS		
Inspector Signature		Construction Project Engineer Signature	
Print Name		Print Name	
Date / /		Date / /	



WisDOT Field Welding Areas of Improvement



- Improved field welding documentation
- Consistent requirements between all contractors and projects statewide
- Yearly review by BOS of all weld procedures, welder qualifications, and contractor inspector qualifications each contractor will use
- Shift back to WisDOT intended roles for field welding

Contractor ► Quality Control (inspection of 100% of welds)

WisDOT ► Quality Assurance



WisDOT Field Welding Library



- Project Managers with access to the Fabrication Library will automatically have permission to view files and contribute to the Field Welding Library
- Contractor's Field Welding Plans may be sent to the following email address:
DOTDLStructuresFabrication@dot.wi.gov

Fabrication & Quality Assurance SharePoint Document Library

Bureau of Structures
Design & Construction
Maintenance & Inspection
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Contact [Kristin Revello](#) for questions about this page.



Structures Construction Records

+ New Upload Quick edit Sync Export to Excel Nintex Workflow

Field Welding Forms

Name	Structure ID:Constr...	Structure ID	Content Type	Contractor	Field Inspector Name	Created	Created By	Modified B
1021-03-74 B-18-232 Field Wel...	1021-03-74	B180232	DT2320 Field Welding Checklist	Lunda Construction	Eric Bloom	June 26	Bowker, Jessica L - DOT	Bowker, Je...
DT2320 West Abut. Pile Driving....	7239-00-70	B270162	DT2320 Field Welding Checklist	Concrete Structures, Inc.	Daniel Pekol	May 9	Brandon Kaiser	Principe, Ca...
DT2320-N.Abut5.11.18.pdf	9087-01-71	B420134	DT2320 Field Welding Checklist	Pheifer Brothers Const...	Eric Masiarchin	June 5	boys Masiarchin	Principe, Ca...
DT2320-N.Abut5.17.18.pdf	9087-01-71	B420134	DT2320 Field Welding Checklist	Pheifer Brothers Const...	Eric Masiarchin	June 5	boys Masiarchin	Principe, Ca...
DT2320-S.Abut5.31.18.pdf	9087-01-71	B420134	DT2320 Field Welding Checklist	Pheifer Brothers Const...	Mike Gehl	June 5	boys Masiarchin	Principe, Ca...
DT2320-S.Abut6.1.18.pdf	9087-01-71	B420134	DT2320 Field Welding Checklist	Pheifer Brothers Const...	Mike Gehl	June 5	boys Masiarchin	Principe, Ca...
DT2320-S.Abut6.4.18.pdf	9087-01-71	B420134	DT2320 Field Welding Checklist	Pheifer Brothers Const...	Mike Gehl	June 5	boys Masiarchin	Principe, Ca...
DT2337_2018_04_30_LundaCon...			DT2337 Contractor's Field Welding Plan	Lunda Construction		May 1	Principe, Carla S - DOT	Principe, Ca...
dt2337_2018_05_04_PheiferBrot...			DT2337 Contractor's Field Welding Plan	Pheifer Brothers Const...		May 15	Principe, Carla S - DOT	Principe, Ca...
dt2337_2018_05_15_RadkeCons...			DT2337 Contractor's Field Welding Plan	Radtko Contractors		May 15	Principe, Carla S - DOT	Principe, Ca...
DT2337_2018-04-25_LarsonCon...			DT2337 Contractor's Field Welding Plan	Larson Construction		April 25	Principe, Carla S - DOT	Principe, Ca...
dt2337_2018-04-27_KraemerNo...			DT2337 Contractor's	Kraemer Construction		May 1	Principe, Carla S - DOT	Principe, Ca...

DT2320 Forms
(Submitted to Drop-Box by PM)

DT2337 Forms
(Added by BOS)



WisDOT Field Welding

Primary Members



- Notification must be given to the SFU in advance of any field welding on primary members. Any welding to primary load carrying members must be approved by BOS.
- A Certified welding inspector (CWI) is required to inspect field welding to primary members. If the contractor or its sub-contractor does not have a CWI on staff, it is the responsibility of the contractor to enlist a qualified CWI.



WisDOT Field Welding Contractor Subs



- Prior to any subcontractor performing field welding on your project, they will need to have an accepted DT2337 on file with Bureau of Structures in the Field Welding Library that covers the intended work.



Bridge Tech Meeting Feedback Discussion



Questions? Concerns?